ISKANDEROVA, A.D. [translator]; MURINA, G.A. [translator]; MIRKINA, S.L. [translator]; POLEVAYA, N.I. [translator], red.; CHERNOVA, N.N. [translator]; SHUKOLYUKOV, Yu.A. [translator]; KOLOSKOVA, M.I., red.izd-va; GODOVIKOVA, L.A., red.izd-va; AVERKIYEVA, T.A., tekhn.red.

[Radiological methods for absolute age determination; articles translated from the English and the German] Radiologicheskie metody opredeleniia absoliutnogo geologicheskogo vremeni; sbornik statei. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geologii i okhrane nedr, 1959. 181 p. (MIRA 13:10)
(Geological time)

POLEVAYA, N.I.; KAZAKOV, G.A.; MURINA, G.A.

Glauconites as indicators of the geological time. Geokhimiia no.1:3-10 '60. (MIRA 13:6)

1. All-Union Scientific Research Institute of Geology, Leningrad, and V.I.Vernadskiy Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Glauconite) (Geological time)

POLEVAYA, N. I., MURINA, G. A., KAZAKOV, G. A.

Using glauconites for determining the absolute age of sedimentary rocks. Sov. geol. 3 no.7:103-115 Jl '60.
(MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Glauconite) (Rocks, Sedimentary) (Geological time)

POLEVAYA, N.I.; MURINA, G.A.; KAZAKOV, G.A.

Absolute age of lower Paleozoic and late Pre-Cambrian glauconites in the European part of the U.S.S.R. Dokl. AN SSSR 133 no.6:1425-1427 Ag '60. (MIRA 13:8)

1. Predstavleno akad. D.I.Shcherbakovym.
(Glauconite) (Geology, Stratigraphic)

MURINA, G.A.; SPRINTSSON, V.D.

Retention of radiogenic argon in glauconites. Geokhimiia no.5:459-462 '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut, Leningrad.

(Argon)
(Glauconite)

MURINA, G.A.

Cation exchange and the preservation of radiogenic argon in glauconites. Inform. sbor. VSEGEI no.54:3-9 '62. (MIRA 17:1)

MURINA, G.A.; IVANOV, Ye.G.

Excessive argon in rocks. Inform.sbor. VSEGEI no.54:11-17 '62.
(MIRA 17:1)

KHOREVA, B.Ya.; MURINA, G.A.

Preliminary data on the absolute age of granitoids and metamorphic rocks in the Irtysh shear zone of the Altai. Inform.sbor. VSEGEI no. 54:69-81 '62. (MIRA 17:1)

YANOV, E.N.; PREDTECHENSKIY, N.N.; POLEVAYA, N.I.; MURINA, G.A.; MIRKINA, S.L.; ISKANDEROVA, A.D.; YEFIMOV, K.P.; CHEN' YUY-VEY [Ch'ên Yü-wei]; TITOV, N.Ye.; PANTELEYEV, A.I.; KOCHEGURA, V.V.; GIRFANOVA, O.M.; ZUYEV, A.V.; NIKOL'SKIY, Yu.I.; BURE, G.N.

Problems of the methods of geological investigations. [Trudy] VSEGEI 92:91-98 '63. (MIRA 17:4)

SOLOV'YEVA, V. N.; KARDASHOV, D. A.; MASHINA, M. A.; MURINA, I. S.
MIKHAYLOVA, L. A.

Phenol-rubber adhesive of higher elasticity. Plast. massy no.11:44-46 '62. (MIRA 16:1)

(Adhesives) (Phenol condensation products)

ZHALYBIN, V.I.; SINEL'NIKOV, M.I.; MININZON, R.D.; MOSHKEVICH, Ye.I.; MURINA, K.N.; CHERNYAVSKAYA, S.G.; KHRISTOFOROVA, L.I.; POTAPOVA, V.P.

Nature of spiderlike pitting corrosion cracks of steel, and ways for their elimination. Stal' 25 no.10:941-944 O '65. (MIRA 18:11)

1. Institut "UkrNIISpetsstal'" i zavod "Dneprospetsstal'".

MAL'TSEV, M.V., kand.tekhn.nauk; MURINA, M.V., inzhener; ROGEL'BERG, L.N., inzh.

Modification of the structure of aluminum bronze. TSvet.met. 27 no.2:60-66 Mr-Ap '54. (MIRA 10:10)

1. Mintsvetmetzoloto.

(Aluminum bronze)

PRIKHOT'KO, A F

24(7) p 3 PHASE I BOOK EXPLOITATION SOV/1369

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Dazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Murina, T.M.

AUTHOR: Murina, T.M. 109-10-6/19

TITLE: Radio Spectroscope for the Investigation of the Spin Spectra of Molecules (Radiospektroskop dlya issledovaniya vrashchatel'nykh spektrov molekul)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.II, No.10, pp. 1271 - 1278 (USSR).

ABSTRACT: The equipment described consists of a stabilised klystron, an absorption cell, a receiving or detecting head, a 75 kc/s amplifier, a synchronous detector, a recording device, a Stark modulator and a klystron frequency stabiliser (see Fig.1). Stabilisation of the klystron frequency is done by means of a circuit consisting of a cavity resonator, a low-frequency amplifier, an auxiliary klystron, the stabilised klystron, a crystal mixer, the absorption cell, a diode-phantastron circuit, a coincidence circuit and an intermediate frequency amplifier (see Fig.2). The reference frequency for the stabilisation of the operating klystron is provided by a cavity resonator whose frequency can be adjusted over a certain range. This permits the klystron to be tuned over a comparatively small range of frequencies (40-60 Mc/s), but if a number of different klystrons are employed, it is possible

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Radio Spectroscope for the Investigation of the Spin Spectra of Molecules.

to cover the frequency range of 10 000 to 43 000 Mc/s. Operation of the stabilising system, in particular that of the diode-phantastron circuit (see Fig.3), is analysed in some detail and it is shown that its stabilisation coefficient is greater than 500. The equipment was used to measure the spectrum of a C_2H_5Cl molecule, the method employed being as follows: the frequency of a crystal-stabilised oscillator operating at 10 Mc/s is multiplied up to 540 Mc/s by means of electron tubes and then up to the klystron frequency by means of rectifier diodes. The resulting frequency and the klystron frequency are mixed by means of a crystal detector and the resulting difference frequency is applied to a receiver and to an oscillograph. The signal at the output of the receiver (as seen on the oscillograph) is in the form of a pulse whenever the difference frequency corresponds to the intermediate frequency of the receiver. By tuning the receiver, the absorption line of the investigated substance can be made to coincide with the pulse of the receiver. The measurements of the spectra are not entirely unambiguous and it is therefore necessary to employ some sort of modulation for the absorption lines. It appears
Card2/3 that one of the most convenient methods of modulation is that

Card 3/3

SOV/109-3-11-10/13

AUTHORS: Murina, T.M., Prokhorov, A.M. and Chayanova, E.A.

TITLE: Measurement of the Absolute Intensity of the Absorption Lines (Izmereniye absolyutnykh intensivnostey liniy pogloshcheniya) (Letter to the Editor)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 11, pp 1402 - 1404 (USSR)

ABSTRACT: It is shown that the measurement of the absolute intensity of the absorption lines can be done by means of a ferrite modulator such as shown in Figure 1. This consists of (1, 2) sections of a rectangular waveguide, (3) a circular waveguide, (4) a magnetising solenoid, (5) sample of ferrite and (6) a dielectric holder. The modulator is based on the Faraday effect and permits the modulation of transmitted power at the frequency of the Stark modulation. For the measurements, the modulator is placed between a klystron and an absorbing cell, the modulation frequency being 75 kc/s. It is shown that, if the detector (at the output of the waveguide (2) in Figure 1) has a square characteristic, the ratio of the low-frequency component of the output voltage to the direct-current component is equal to twice the modulation index. A curve of the voltage ratio as

Card1/2

Measurement of the Absolute Intensity of the Absorption Lines

a function of the detector current is shown in Figure 2. From this, it is seen that the detector has a square characteristic from 0 to 0.4 mA. The method was used to determine the absolute intensity of the ammonia absorption lines. It was found that the error was of the order of 3.5%. There are 2 figures and 2 Soviet references.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Institute of Physics imeni P.N. Lebedev of the Ac.Sc.USSR)

SUBMITTED: February 22, 1958

Sov/51-4-4-14/24

AUTHORS: Barchukov, A.I., Murina, T.M. and Prokhorov, A.M.

TITLE: Microwave Spectrum and Rotational Constants of the C_2H_5Cl Molecule (Mikrovolnovyy spektr i vrashchatel'nyye postoyannye molekuly C_2H_5Cl)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 4, pp 521 - 523 (USSR).

ABSTRACT: Microwave rotational spectrum of ethyl chloride (C_2H_5Cl) was first described in 1954 (Referencel). An approximate value of the rotational constant A for the $C_2H_5Cl^{35}$ molecule and the value of the dipole moment μ_a were given in Ref 2. The present paper reports a more precise determination of A from transitions related to changes of the dipole moment μ_b. For this purpose, the transitions $0_{00} \rightarrow 1_{11}(\nu = A + C)$ and $1_{01} \rightarrow 1_{10}(\nu = A - C)$ were found to be most convenient. The first of these transitions lies in the region of 36 000 Mc/s and the second in the 26 000 Mc/s region. The ethyl chloride spectrum was found to be very rich in lines in the range from 25 000 to 42 000 Mc/s. The lines of

Microwave Spectrum and Rotational Constants of the C_2H_5Cl Molecule

the Q-branch from I = 1 to I = 9 lie in this range. The Q-branch was identified graphically by a method described in the present note. The value of A for the $C_2H_5Cl^{35}$ molecule obtained from the transition $1_{01} \rightarrow 1_{10}$ is 31 337.6 ± 0.5 Mc/s and the value of A obtained from the $0_{00} \rightarrow 1_{11}$ transition is 31 336.4 Mc/s. Since the hyperfine structure of the $0_{00} \rightarrow 1_{11}$ transition was not fully resolved, the value of A obtained from the $1_{01} \rightarrow 1_{10}$ transition is the more reliable. From the transitions considered here the value of the rotational constant C was found to be 4 961.6 Mc/s, which agrees with the value reported in Ref 1. The rotational constant A for the $C_2H_5Cl^{37}$ was found to be 31 285.7 Mc/s. Table 1 on p 522 gives the frequencies of the $1_{01} \rightarrow 1_{10}$ transition lines for various values of F . Table 2 gives the calculated (second column) and experimental (third column) values of rotational constants A, B and C for the $C_2H_5Cl^{35}$ and

Sov/51-4-4-14/24

Microwave Spectrum and Rotational Constants of the C_2H_5Cl Molecule

$C_2H_5Cl^{37}$ molecules. Table 2 shows good agreement between the experimental and calculated values. The value of the dipole moment μ_a was found from the Stark splitting of the $0_{00} \rightarrow 1_{01}$ transition. This value is given as 1.745 D $\pm$ 1.2% . There are 1 figure, 2 tables and 3 references, 1 of which is Soviet and 2 are in English.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Physics Institute imeni P.N. Lebedev, Ac.Sc. USSR)

SUBMITTED: April 4, 1957

Card 3/3 1. Ethyl chlorides--Spectrographic analysis

5.5800 (also 1144)

28533

S/109/61/006/009/016/018
D201/D302

AUTHOR: Murina, T.M.

TITLE: A radiospectroscope with a disc resonator

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 9, 1961, 1586 - 1588

TEXT: In the present article the author describes a superheterodyne resonating radiospectroscope, utilizing the Stark effect modulation. The reflector type resonator has a ferrite circulator for easy tuning. The resonator is made of ground, but no polished, brass and has a Q of 2000-3000. Since a disc resonator has a much larger volume compared with an ordinary cavity, it saturates at large power levels (although at smaller ones than a waveguide cavity). Since with the decreasing power level (owing to saturation) the sensitivity of a video spectroscope decreases, heterodyning is applied. In the arrangement designed by the author, the local oscillator is a klystron, detuned with respect to the signal klystron

Card 1/3

A radiospectroscope with a ...

by 27 Mc/s. The local oscillator is a phase stabilized with respect to the signal oscillator. The frequency of the signal klystron changes for several megacycles from a 50 c/s saw tooth voltage. The 75 Kc/s voltage from the stark effect modulator is being applied to the discs, one of which is earthed. Frequencies of absorption lines were determined by means of markers derived from a crystal controlled marker generator and from the klystron output, displayed on double beam CRO. The device was checked at 15,000 Mc/s and used to measure the dipole moment of a molecule of formaldehyde (CH_2O). The use of a disc resonator is said to permit very accurate measurements of spacing between the discs and consequently accurate determination of the electric field intensity. It also obviates calibration against a known depole moment. While in waveguide cavities σ, Stark effect components are observed which correspond to parallel fields in a disc cavity π, components are observed which correspond to perpendicular fields. The formaldehyde dipole moment was determined from measuring the frequency difference between the Stark effect lines and a non-shifted line in the $2_{11} \rightarrow 2_{12}$ transi-

Card 2/3

A radiospectroscope with a ...

tion. The observed structure was in full agreement with theory. The obtained value of the dipole moment was μ_o = [redacted].34 debye . The accuracy of measurements was less than 1 % owing to technical reasons. The obtained value for the dipole moment is the same as obtained in (Ref. 3: J. Phys. Soc. Japan, 1960, 15, 2). There are 1 figure and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: Quantum Electronics, N.Y., 1960; J. Phys. Soc. Japan, 1960, 15, 2.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Institute of Physics im. P.N. Lebedev, AS USSR)

SUBMITTED: February 13, 1961

Card 3/3

L 17786-63 EPF(c)/EWT(m)/BDS Pr-4 RM/WW

ACCESSION NR: AP3005845 S/0051/63/015/002/0221/0225

Author: Murina, T.M.; Prokhorov, A.M.

57

TITLE: Investigation of the methyl chloride molecule by means of a beam spectroscope with a disk resonator.

SOURCE: Optika i spektroskopiya, v.15, no.2, 1963, 221-225

TOPIC TAGS: microwave spectrum, rotational transition, hyperfine structure, beam spectroscopy, methyl chloride

ABSTRACT: The present study of CH_3Cl was one of the proposed series of investigations of the hyperfine structure of molecules by means of a molecular beam (microwave) spectroscope with a disk resonator with Stark modulation (T.M.Murina, Radiotekhnika i elektronika, 6, 1586, 1961). Specifically, the authors investigated the magnetic hyperfine structure of the CH_3Cl molecule associated with the rotational $J = 0 \rightarrow J = 1$ transitions. As a result of quadrupole splitting of the rotational levels there should be observed three transitions, but in the present experiments only two were observed: $F_1 = 3/2 \rightarrow F_1 + 1 = 5/2$ (frequency 26598.59 Mc) and $F_1 = 3/2 \rightarrow F_1 - 1 = 1/2$ (frequency 26604.57 Mc). The calculated and experimental

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ACCESSION NR: AP3005845

spectra are reproduced. The agreement is satisfactory, as is that between the calculated and experimental values of the hyperfine magnetic structure constant (IJ coupling constant) A for the hydrogen nuclei (A = -7.5 ± 0.5 kc). (I is the nuclear spin and J is the molecular angular momentum.) Orig.art.has: 4 formulas, 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 20Dec62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 003

Card 2/2

L 44786-65 EWA(k)/FBD/EWG(r)/EWT(l)/EWT(m)/EEC(k)-2/EEC(t)/T/EWP(t)/EWP(k)/
EEC(b)-2/EWP(b)/EWA(m)-2/EWA(h) Pn-4/Pn-4/Po-4/Pf-4/Pi-4/Pl-4/Peb SCTB/
IJP(c) WG/JD/JG

ACCESSION NR: AP5010827 UR/0020/65/161/004/0805/0809

AUTHOR: Kostin, V. V.; Murina, T. M.; A. M. Prokhorov (Corresponding member AN SSSR); Udovenchik, V. T.

TITLE: Calcium fluoride laser doped with doubly ionized dysprosium

SOURCE: AN SSSR. Doklady, v. 161, no. 4, 1965, 806-809

TOPIC TAGS: fluorite laser, luminescence spectrum, absorption spectrum, laser, calcium fluoride laser, laser oscillation

ABSTRACT: Fluorite crystals, 70—80 mm long and 7—10 mm in diameter with different concentrations of Dy^{3+} (0.05, 0.1, 0.2, 0.3, and 0.5%), were prepared in the single-crystal laboratory of the Physics Institute AN SSSR. Gamma-irradiation at about 10^8 r converted the trivalent dysprosium into divalent. The luminescence and absorption spectra of the resultant crystals were first measured. The absorption spectrum was found to consist of a strong absorption band from 2300 to 4900 Å, and three weaker and narrower bands, with maxima at 5800, 7150, and 9100 Å. Pumping at any of these three frequencies leads to strong luminescence in the 2.3—2.6 μ range. The most intense luminescence occurred at 2.36 μ.

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ACCESSION NR: AP5010827

The laser-operation threshold was measured under pulsed conditions and was found to be about 25 J. The duration of luminescence was approximately 18—26 msec. Laser operation in the continuous mode was made at the supercooled liquid nitrogen temperature. The continuous generation line width was measured with a Fabry-Perot interferometer, the spectrum being scanned by varying the pressure inside the interferometer plates. The results show that the generation line width does not exceed 0.01 cm^{-1}. Narrower lines are expected at the temperatures of liquid neon and helium, and tests to determine this are being planned. It is pointed out in conclusion that a line width of 0.01 cm^{-1} is the narrowest ever attained for solid-state lasers. Orig. art. has: 3 figures.

[02]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 10Jul64 ENCL: 00 SUB CODE: EC, SS

NO REF SOV: 003 OTHER: 003 ATD PRESS: 3257

MEB

Card 2/2

L 10949-66 EWT(l)/EWP(e)/EWT(m)/EEC(k)-2/T/EWP(t)/EWP(k)/EWP(b)/EWA(m)-2/EWA(h)
ACC NR: AP6002423 SCTB/LJP(c) SOURCE CODE: UR/0020/65/165/005/1056/1058
MS/JD/WH

AUTHOR: Konyukhov, V. K.; Kulevskiy, L. A.; Kostin, V. V.; Murina, T. M.; Prokhorov, A. M. (Corresponding member AN SSSR)

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: A giant-pulse $CaF_2:Dy^{2+}$ laser with continuous pumping

SOURCE: AN SSSR. Doklady, v. 165, no. 5, 1965, 1056-1058

TOPIC TAGS: giant pulse laser, dysprosium, calcium fluoride, xenon lamp, ~~pumping~~ calcium fluoride, crystal, laser pumping, laser beam, laser

ABSTRACT: The generation of repeating giant pulses at 2.36 μ is reported in $CaF_2:Dy^{2+}$ pumped continuously by xenon lamps. Such pulses were first achieved in $CaF_2:Dy^{2+}$ by Ye. M. Zolotov, A. M. Prokhorov, and G. P. Shipulo (ZhETF, v. 49, no. 9, 720, 1965), who used ruby laser pumping. A similar method of generating giant pulses in YAlG:Nd was used by J. E. Gausic, M. L. Hensel, and R. G. Smith (Appl. Phys. Lett., 6, no. 9, 175, 1965). The laser system used in the present investigation (Fig. 1) consisted of a cylindrical dysprosium-doped calcium fluoride crystal 70 mm long and 7 mm in diameter with plane-parallel ends. The concentration of Dy^{2+} in CaF_2 was $\sim 10^{17}$ cm^{-3}. The crystal was placed in a dewar, where it was cooled by circulating liquid nitrogen. The pumping was provided by two cw xenon lamps placed together with a dewar in a tight condenser. An internal multilayer dielectric mirror with a re-

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ACC NR: AP6002423

flectivity of approximately 100% was used on one end of the resonator, whose output was Q-switched by means of a rotating (50—500 cps) prism with total internal reflection. The laser beam was incident (at 23°) at a plane-parallel quartz plate and directed at a calorimeter and a liquid-nitrogen-cooled InSb photodiode with a time-resolution of $20 \cdot 10^{-9}$ sec. The time-dependent emission intensity was recorded by

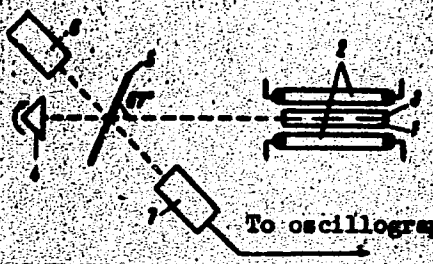

Fig. 1. Schematic of the laser system

1 - $CaF_2:Dy^{2+}$ crystal; 2 - continuous pumping xenon lamps; 3 - multilayer dielectric mirror; 4 - rotating prism with total internal reflection; 5 - plane-parallel quartz plate; 6 - calorimeter; 7 - InSb photodiode.

means of an InSb photodiode and DEO-1 and S1-11 oscillographs. The mean intensity in both directions (see Fig. 1) was 0.05 w for both fixed and rotating (at 200 cps) prisms. This indicates that the rotation frequency of the prism was near optimal. The duration and repetition rate of the giant pulses were 1.2×10^{-7} sec (calculated value was 1.05×10^{-7}) and 200 cps, respectively, resulting in a peak power of 2×10^3 w. The proposed high-intensity laser can be used in studies of two-photon excitation of semiconductors with a narrow forbidden gap. Orig. art. has: 2 figures. [YK]

SUB CODE: 20 / SUBM DATE: 02Sep65/ ORIG REF: 003/ OTH REF: 005/ ATD PRESS: 4070

Card 2/2

L 04564-67 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD/JW/JG

ACC NR: AP6032472 SOURCE CODE: UR/0056/66/051/003/0773/0776

AUTHOR: Dzhibladze, M. I.; Zvereva, G. A.; Kostin, V. V.; Murina, T. M.; Prokhorov, A. M.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Investigation of the luminescence line width and of the temperature shift of the continuous generation frequency of Dy^{2+} in CaF_2

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 3, 1966, 773-776

TOPIC TAGS: laser, spectroscopy, solid state laser, paramagnetic laser, cw laser, fluorite, dysprosium

ABSTRACT: In view of the possible use of CaF_2 crystals activated with divalent dysprosium as laser rods at 2.36 μ wavelength, the authors have calculated the probabilities of the nonradiative transitions of the Dy^{2+} ion in CaF_2 which cause the homogeneous broadening of the luminescence lines, and also investigated the temperature dependence of the frequency shift of a $Dy^{2+}:CaF_2$ cw laser in the vicinity of 78K. It is shown that the broadening of the luminescence line (the transition $7T_1^{(2)} \rightarrow 8T_2^{(2)}$) is determined essentially by the lifetime of the lower level $8T_2^{(2)}$, since the probability of the nonradiative transition from this level is of the order of 10^{10} sec^{-1}. The nonradiative transitions from the lower level, $8T_2^{(2)} \rightarrow 8E^{(2)}$ and $8T_2^{(2)} \rightarrow 8T_1^{(1)}$,

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ACC NR: AP6032472

determined in the harmonic approximation by perturbation theory, had probabilities 6.61×10^9 and 7.13×10^9 sec^{-1}, respectively at 0°K. The temperature dependence of the shift of the cw frequency, measured by means of a Fabry-Perot interferometer with a procedure described earlier (DAN SSSR v. 161, 806, 1965), is found to correspond to a shift of 0.0095 ± 0.0025 cm^{-1} per degree, which is approximately double the value calculated from the change in the crystal field with changing temperature. The discrepancy is attributed to the fact that the point-charge model of the crystal field is not a good approximation for $Dy^{2+}:CaF_2$. Orig. art. has: 2 figures, 4 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 05Apr66/ ORIG REF: 004/ OTH REF: 004/ ATD PRESS: 5100

Card 2/2 vmb

MURINA, V.V.

Bipolar distribution of priapulids. Okeanologiia 4 no.5:873-875 '64 (MIRA 18:1)

1. Institut biologii yuzhnykh morey AN UkrSSR.

BONETSKAYA, A.K.; MURINA, V.V.

Adsorption and heat of adsorption from solutions of barium sulfate. Vest.Mosk.un. Ser.mat.,mekh.,astron.,fiz.,khim.11 no.1:165-168 '56.

1. Kafedra obshchey fiziki dlya khimicheskogo fakul'teta Moskovskogo universiteta.
(Adsorption) (Barium sulfate) (Heat of adsorption)

MURINA, V. V.

USSR/ Physical Chemistry - Surface phenomena. Adsorption. Chromatography. Ion exchange B-13

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11393

Author : Aleksandrova G.I., Kiselev V.F., Krasil'nikov K.G., Murina V.V., Sysoyev Ye.A.

Inst : Academy of Sciences USSR

Title : Heat of Wetting of Silicagel of Different Degrees of Hydration by Some Organic Liquids

Orig Pub : Dokl. AN SSSR, 1956, 108, No 2, 283-286

Abstract : Determined were the heat values of wetting of surface unit of dehydrated at 300-900°, of specimens of silicagel (SG) of different porosity by absolute methanol (Q_1), n-propanol (Q_2) and non-polar n-heptane (Q_3). Q_1 does not depend on the nature of porosity of SG; Q_2 and Q_3 are higher in the case of coarsely porous SG, than for finely porous, which is attributed to the effect of pores which increases on transition to larger molecules of C_3H_7OH and C_7H_{14}. Q_1 and Q_2 increase linearly with degree of hydration (θ_{H_2O}) of SG surface, which confirms (see reference) the assum

1/2

USSR/ Physical Chemistry - Surface phenomena. Adsorption, Chromatography. Ion exchange B-13

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11393

ption of heterogeneity of SG surface. Q_3 is almost not dependent on H_2O. The conclusion is arrived at that most of the earlier data on heat of wetting of SG are not mutually comparable since no account was taken of the correlation between Q and θ_{H_2O} and the nature of porosity of SG (see RZhKhim, 1956, 77773)

2/2

5(4)

AUTHORS: Yegorov, M. M., Kiselev, V. F., Krasil'nikov, K. G., Kurina, V. V. SOV/76-33-1-11/45

TITLE: The Effect of the Surface Nature of Silica Gel and Quartz on Their Adsorption Properties (Vliyaniye prirody poverkhnosti silikagelya i kvartsa na ikh adsorbtsionnyye svoystva) III. Heats of Wetting of Silicon Dioxide With Various Liquids (III. Teploty smachivaniya kremnezema razlichnymi zhidkostyami)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 65-73 (USSR)

ABSTRACT: In connection with previous papers the effect of the hydration of the surface of silicon dioxide on the adsorption energy of water and methanol in the form of heat of wetting (HW) is investigated. HW was determined in several SiO_2 samples with water, methanol, n-propanol, and n-heptane in dependence on the hydration degree of the surface. Data on the HW of the silica gels KSK with water were taken from M. M. Yegorov's thesis (Ref 18). The HW was measured by means of a calorimeter with a temperature sensitivity of 5.10^{-5}°C. A table of the investigated silica gels with the HW obtained for water is given. An investigation of the effect of the glowing temperature on the HW

Card 1/3

The Effect of the Surface Nature of Silica Gel and Quartz on Their Adsorption Properties. III. Heats of Wetting of Silicon Dioxide With Various Liquids

(Fig 1) showed that a glowing temperature of 200-300°C the function curves pass through a maximum. An increase in the glowing temperature up to 1000°C resulted in a surface decrease, e. g. in silica gel K-2, of several m^2/g. A treatment at 300°C is considered the standard. Here, the dependence of the HW on the hydration of the surface is expressed by a straight line. A wetting of thermally dehydrated samples with water results in the formation of hydration heat. A hydrated quartz surface differs qualitatively from a corresponding silica gel surface which can be explained by the closer packing of the hydroxyl groups (in quartz); however, investigations have still to be carried out in this respect (e. g. according to the method of the core-paramagnetic resonance). The HW of methanol does not depend on the porosity of the silica gels, which is the case with n-propanol and n-heptane. In the case of partly dehydrated surfaces a greater HW is obtained by the use of methanol than by that of water which can be explained by the effect of the methyl group in the adsorption. The results of the investigations show that the HW

The Effect of the Surface Nature of Silica Gel and Quartz on Their Adsorption Properties. III. Heats of Wetting of Silicon Dioxide With Various Liquids

of the silica gel with water and methanol depends essentially on the hydration degree of the surface which is not the case with n-heptane. The authors thank B. V. Il'in and G. I. Aleksandrova. There are 3 figures, 1 table, and 22 references, 14 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

GANICHENKO, L.G.; KISELEV, V.F.; MURINA, V.V.

Adsorption properties of the crystalline titanium dioxide surface.
Kin.i kat. 2 no.6:877-886 N-D '61. (MIRA 14:12)

1. Moskovskiy gosudarstvennyy universitet, fizicheskiy fakul'tet.
(Titanium oxide)
(Adsorption)

GANICHENKO, L.G.; KISELEV, V.F.; KRASIL'NIKOV, K.G.; MURINA, V.V.

Effect of the nature of silica gel and quartz surfaces on their adsorption properties. Part 4: Adsorption and heat of adsorption of aliphatic alcohols on powdered silica gel. Zhur.fiz.khim. 35 no.8:1718-1726 Ag '61. (MIRA 14:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Alcohols) (Adsorption)

MURINA, V.V.

Sipunculid fauna of the Mediterranean Sea. Trudy SBS 17:51-76 '64. (MIRA 18:6)

MURINA, V.V.

Some data on the structure of Pelagosphaera larvae (Sipunculidea). Zool.zhur. 44 no.11:1610-1619 '65.

(MIRA 18:12)

1. Institut biologii yuzhnykh morey AN UkrSSR, Sevastopol'.

MURINA, V.V.

USSR/ Biology - Ichthyology

Card 1/1 : Pub. 86 - 31/38

Authors : Murina, V. V.

Title : Luminescence in the North sea

Periodical : Priroda 43/12, page 116, Dec 1954

Abstract : Unusual luminescence noted in the sea near the Orkney islands is investigated and found to be caused by a species of marine life called Metridia lucens.

Institution : .....

Submitted : .....

MURINA, V.V.

Food of eels in the Courland and Vistula Lagoons. Trudy Gidrobiol. ob-va 7:148-162 '56. (MLRA 10:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Courland Lagoon--Eels) (Vistula Lagoon--Eels)

MURINA, V.V.; PERMITIN, Yu.Ye.

Living marine turtle in Moscow. Priroda 45 no.5:115 My '56.
(MLRA 9:8)

1. Kafedra zoologii bespozvonochnykh Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova
(Moscow--Loggerhead turtle)

KURINA, V.V.

Sipunculidae collected by the ship "Ob'" during the first voyage of the Joint Antarctic Expedition in 1956 [with summary in English]. Zool. zhur. 36 no.7:992-998 Jl '57. (MLRA 10:9)

1. Kafedra zoologii bespozvonochnykh Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.
(Antarctic regions--Sipunculidae)

MURINA, V.V.

MURINA, V.V.

Abyssal sipunculids of the genus Phascolion Theel from the northern part of the Pacific Ocean collected by the expeditionary ship "Vitiaz'" during 1950-1955 [with summary in English]. Zool.zhur. 36 no.12: 1777-1791 D '57. (MIRA 11:1)

1. Kafedra zoologii bespozvonochnykh Moskovskogo gosudarstvennogo universiteta.

(Pacific Ocean--Gephyrea)

[illegible]A, V.V., Cand Bio Sci--([illegible]) "S[illegible]ti[illegible] [illegible] [illegible] [illegible] deep-[illegible]ter [illegible]i[illegible]uncul[illegible]." [illegible]os, 1[illegible]. 17 pp ([illegible] [illegible] M.V.Lomonosov), 120 copies ([illegible],47-[illegible], 13[illegible])

MURINA, V.V.

Systematics of two allied species of deep-sea sipunculids of the genus Golfingia according to the materials collected by the ship "Vitiaz" during the expedition of 1949-1955 [with summary in English]. Zool. zhur. 37 no.11:1624-1634 N '58. (MIRA 11:12)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta.
(Pacific Ocean--Gephyrea)

MURINA, V.V.; REZNICHENKO, O.G.

Autoacclimatisation of the crab Rhithropanopeus harrisii tridentatus (Maitland) in the Vistula Lagoon. Trudy Gidrobiol. ob-va 10:235-264 '60. (MIRA 13:9)

1. Moskovskiy gosudarstvennyy universitet, kafedra zoologii bespozvonochnykh i kafedra gidrobiologii.
(Vistula Lagoon--Crabs)

MURINA, V.V.; STAROBOGATOV, Ya.I.

Systematics and zoogeography of priapulids. Trudy Inst.okean. 46:179-200 '61. (MIRA 14:6)

(Gephyrea)

MURINA, V.V.

New and rare species of deep-sea sipunculids of the genus Golfingia. Trudy Inst. okean. 69:216-253 '64.

Fauna of sipunculids of the littoral of the South China Sea. Ibid.: 254-270 (MIRA 17:9)

MURINA, V.V.

On the Red Sea coast; at the Hurghada Institute of Oceanography (the United Arab Republic). Priroda 54 no.8:83-87 Ag '65. (MIRA 18:8)

1. Institut biologii yuzhnykh morey AN UkrSSR, Sevastopol'.

LYSOV, A.S., inzh.; MURINETS, S.V., inzh.; YERSHOV, A.G., inzh.

Comparing various automatic control systems of conveyer charging of the sinter into blast furnaces. Stal' 23 no.12:1073-1077 D '63. (MIRA 17:2)

1. Magnitogorskiy metallurgicheskiy kombinat.

ACCESSION NR: AP4029127 S/0133/64/000/004/0342/0343

AUTHOR: Murinov, D. M. (Deceased); Grepenshchikova, A. Z.; Lyadova, A. A.

TITLE: Search for a new lubricant for the cold rolling of stainless steel pipes

SOURCE: Stal', 23, No. 4, 1964, 342-343

TOPIC TAGS: lubricant, cold rolling, stainless steel, pipe production, OP-10

ABSTRACT: The authors propose the use of a new, more economical lubricant in the production of cold rolled stainless steel pipes. This cheaper lubricant is composed of: 15% chloride salts, 25% talc, 15% polyethylene-monoalkylphenyl ethers OP-10 and 25% naphthenate soap. The introduction and use of the new lubricant should have a great economic effect. Five lubricants with different ratios of the above ingredients were tested. Two of the lubricants cost 227 and 82 rubles per ton, respectively, whereas the presently used lubricant, containing 40% to 50% castor oil or cotton seed oil, 35% to 40% talc and 15% to 20% chloride salts of sodium or ammonium, costs 997 rubles per ton. The change to this new lubricant will not only be an economic saving, but it will also increase the surface quality of the pipes.

ASSOCIATION: Pervoural'skiy novotrubnyy zavod (Pervouralsk Pipe Plant)

Card

MURINOVA, V.G.

Nonoxidizing, low-oxidizing, and rapid heating of metals.
Met. i gornorud. prom. no.1:77 Ja-F '65. (MIRA 18:3)

1. MURINSON, B. Yu.

2. USSR (600)

4. Lemon

7. Rooting lemon trees by air layering. Blul.Glav.bot sada no. 12, 1952
V. A. Shishkin, V

Monthly Lists of Russian Accessions, Library of Congress, March, 1953, Unclassfied.

MURINSON, B.Yu.

Indoor culture of Amaryllis. Priroda 47 no.2:111 F '58.
(MIRA 11:2)

1.Glavnyy botanicheskiy sad AN SSSR, Moskva.
(Amaryllis) (House plants)

MURINSON, B.Yu.

Rooting lemon by means of cuttings. Biul.Glav.bot.sada no.16:89-91 '53. (MLRA 7:4)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.
(Lemon) (Plant propagation)

USSR/ Biology - Botany

Card 1/1 : Pub. 86 - 19/35

Authors : Murinson, B. Yu.

Title : Growing laurel indoors

Periodical : Priroda 44/2, 100 - 101, Feb 1955

Abstract : The laurel tree is described and information is given as to its use for food and in industry. The botanical characteristics are explained along with directions for indoor cultivation and protection against parasites.

Institution : Chief Botanical Garden of the Acad. of Sc. of the USSR

Submitted : .....

MURINSON, B. Yu.

Clivia. Priroda 44 no.10:113-114 O'55. (MLRA 8:12)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.
(Clivia)

Murinson, B. Yu.

USSR/ Biology - Botany

Card 1/1 Pub. 86 - 28/38

Authors : Murinson, B. Yu.

Title : Indoor cultivation of the fig tree

Periodical : Priroda 44/7, 115-116, Jul 1955

Abstract : A description is given of the growth characteristics, fruit bearing time, etc. of the ficus carica. Directions are given for growing the tree indoors with periods of outdoor life in the summer time. Illustrations.

Institution : .....

Submitted : .....

DUBROVITSKAYA, N.I.; KRENKE, A.N.; MURINSON, B.Yu.

Raising lemons indoors. Biul. Glav. bot. sada no.24:19-30 '56. (MLRA 9:11)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.
(Lemon) (Window-gardening)

MURINSON, B.Yu.

Collection of citrus plants at the Main Botanical Garden. Biul. Glav.bot.sada no.25:117-120 '56. (MLRA 10:1)
(Moscow--Citrus fruits)

MURINSON, B.Yu.

Abutilon. Priroda 45 no.10:113-114 O '56. (MLRA 9:11)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR, Moskva.
(Abutilon)

M.

USSR/Cultivated Plants - Ornamental.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15921

Author : B.Yu. Murinson
Inst :
Title : African Hemp (Sparmannia africana)
(Sparmaniya afrikanskaya)

Orig Pub : Priroda, 1957, No 3, 117.

Abstract : A brif description of the African hemp (Sparmannia africana). It is reproduced by grafts, grows well indoors and blossoms from January through April. Tips are given on the reproducing, culturing and the best ways of keeping the plant.

Card 1/1

USSR/Cultivated Plants - Ornamental. M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82599

Author : Murinson, B.Yu.
Inst :
Title : Oleander

Orig Pub : Priroda, 1957, No 7, 103

Abstract : A number of suggestions on growing, transplanting and care of oleander in room cultivation. A method of propagation in room cultivation with the aid of cuttings is described. Measures for pest control are indicated.

Card 1/1
1471

ENT

- 184 -

KURINSON, B.Yu.

Crinum cultivation. Priroda 46 no.1:100-101 Ja '57. (MLRA 10:2)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR, Moskva.
(Crinum)

VERZILOV, V.F., doktor biologicheskikh nauk; MURINSON, B.Yu.

Using plastic films and growth promoting substances in begetative propagation. Priroda 46 no.2:89-91 F '57. (MLRA 10:3)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR, Moskva (for Murinson)
(Growth promoting substances)
(Plant propagation)

MURINSON, B.Yu.

African sparmania. Priroda 46 no.3:117 Mr '57. (MLRA 10:3)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR (Moskva)
(Plants, Decorative)

MURINSON, B. Yu., starshiy sadovod

Growing lemons on the window sill. IUn.nat.no.1:34-35 Ja '58.
(MIRA 10:12)

1. Glavnyy botanicheskiy sad AN SSSR.
(Lemon)

AUTHOR: Murinson, B.Yu.

TITLE: Indoor Growing of Amaryllis (Kul'tura amarillisa v komnate

PERIODICAL: Priroda, 1958, Nr 2, p 111 (USSR)

ABSTRACT: The article deals with the indoor growing of the amaryllis, methods of breeding, etc. There is 1 photo.

ASSOCIATION: Glavnyy botanicheskiy sad Akademii nauk SSSR, Moskva (Main Botanical Gardens of the USSR Academy of Sciences, Moscow)

Card 1/1 1. Botany--USSR

MURINSON, B.Yu.

Experiment with direct planting of citrus plants in the ground of the hothouse. Biul.Glav.bot.sada no.32:110-111 '58.
(MIRA 12:5)

1. Glavnyy botanicheskiy sad AN SSSR.
(Citrus fruits) (Greenhouse plants)

MURINSON, B.Yu.

Eugenia. Priroda 49 no.7:119 Jl '60. (MIRA 13:7)

1. Glavnyy botanicheskiy sad AN SSSR, Moskva.
(Eugenia)

MURINSON, B.Yu.

Golden tree. Priroda 49 no.8:110 Ag '60. (MIRA 13:8)

1. Glavnyy botanicheskiy sad AN SSSR, Moskva.
(Aucuba)

MURINSON, B.Yu.

Scarbororough lily. Priroda 49 no.10:101 O '60. (MIRA 13:10)

1. Glavnyy botanicheskiy sad AN SSSR, Moskva.
(Amaryllis)

MURINSON, B.Yu.

Fuchsia. Priroda 50 no. 3:115 Mr '61. (MIRA 14:2)

1. Glavnyy botanicheskiy sad AN SSSR, Moskva.
(Fuchsia)

MURINSON, B.Yu.

Sarcococca. Priroda 50 no.9:116 S '61. (MIRA 14:8)

1. Glavnyy botanicheskiy sad AN SSSR (Moskva).
(Sarcococca)

MURINSON, B.Yu.

Fatsia. Priroda 51 [i.e. 52] no.5:118 '63. (MIRA 16:6)

1. Glavnyy botanicheskiy sad AN SSSR, Moskva.
(House plants) (Fatsia)

S/048/62/026/011/021/021
B125/B102

AUTHORS: Yurasova, V. Ye., and Murinson, E. A.

TITLE: Peculiarities of anisotropy in the cathode sputtering of single crystals

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 11, 1962, 1445-1448

TEXT: The anisotropy of hexagonal crystals is studied on cylindrical zinc single crystals with the basal plane (0001). The most densely packed directions ($11\bar{2}0$) were perpendicular to the cylinder axis. The specimen (of about the same height and diameter) was attached to a glass tube and surrounded by a glass or mica collector. The glass tube contained a low pressure plasma (10^{-3} mm Hg) of high density (10^{13} cm^{-3}). The test conditions are described by V. Ye. Yurasova and I. G. Sirotenko (Zh. eksperim. i teor. fiz., 41, 1359 (1961)). Zinc is best sputtered as follows: current density at the specimen 1 ma cm^{-2}, negative voltage at the specimen 1.2 - 1.3 kv, krypton pressure $5 \cdot 10^{-3}$ mm Hg, time of sputtering 1 hr. The substance of hexagonal crystals, like that of cubic crystals, is mainly atomized in the direction of the densest packing.

Cathode sputtering of zinc single crystals onto a cylindrical glass collector supplied sufficiently distinct spot patterns. The intensity of these spots decreases from the center toward the spot margin according to $I/I_0(\alpha) = e^{-p_0 \sin^2\alpha} \cdot \cos\alpha$, where $p_0 = 9.5$ for Zn, and $p_0 = 3.3$ for Cu in Kr. In the evaporation of a monocrystalline copper sphere ($d = 4$ mm) and at ratios $\mu = d/l$ between 0.1 and 0.33, the photometric curves remain nearly constant, and resemble the curves for the plane specimen. d is the diameter of the sphere, and l is the distance between collector and specimen. The angular size of the spot is $\tan(\delta/2) = \tan(\delta_0/2) + \mu/2$ for a plane specimen, where δ_0 is the angular size of the atomized spot when the collector is infinitely distant. The linear size $D_0 \approx 2e \tan(\delta_0/2) + d_0$ of the spot decreases with decreasing distance to the collector, but always remains greater than the diameter of the plane specimen. The linear size of the sputtered spot remains smaller than the specimen diameter in the case of spherical specimens and spherical collectors when the screen is sufficiently near ($\mu = 0.5$). This is due to

Peculiarities of anisotropy ...

the dependence of the single crystal sputtering intensity in the densely packed direction on its angle of inclination φ toward the direction perpendicular to the surface. The sputtering intensity reaches its maximum at $\varphi = 0$, and decreases by about 35% to $\varphi = 30^{\circ}$. There are 4 figures. [illegible]

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gos. universiteta im. M. V. Lomonosova (Physics Division of the Moscow State University imeni M. V. Lomonosov)

Card 3/3

MURINSON, I.M.

Results of organizing a psychoneurological clinic at a large hospital. Zhur.nevr.i psikh. 59 no.10:1272-1274 '59. (MIRA 13:3)

1. Glukhovskaya ob"yedinennaya bol'nitsa (glavnyy vrach N.P. Baglay) Noginskogo gorzdravotdela.
(HOSPITALS PSYCHIATRIC)

MURINSON, I.M. (Moskva)

Antipsychiatric movement in the U.S.A. Zhur. nevr. i psikh. 64 no.3:467-468 '64. (MIRA 17:5)

ARUKSAAR, H.; LIIDEMAA, H.; MARTIN, I.; MÜRK, H.; NEI, I.;
PÕIKLIK, K., REHEMAA, V., red.

[General meteorology and agrometeorology] Üld- ja agrometeoroloogia. Tallinn, Eesti Raamat, 1964. 765 p. [In Estonian] (MIRA 18:7)

MURKELINSKAYA, R.Yu.

Treating taeniarhynchiasis with quinacrine in a day hospital. Med. paraz. i paraz.bol.supplement to no.1:69 '57. (MIRA 11:1)

1. Iz parazitologicheskogo otdela Kirovabadskoy gorodskoy sanitarno-epidemiologicheskoy stantsii
(QUINACRINE) (TAPEWORMS)

MURKES, N.I.

USSR/Electricity - Literature Jun 51

"Review of L. M. Plotrovskiy and Ye. A. Pal's Book 'The Testing of Electric Machines, Part I. General, and The Testing of DC Machines,'" Ye. M. Kovarskiy, N. I. Murkes, A. A. Stupin, Engineers, Sci Res Inst, Min of Elec Ind USSR

"Elektrichestvo" No 6, pp 89, 90

Reviewers consider recommendation of this book by the Min of Higher Educ as a manual for power engineering and elec engineering institutes a mistake in view of its many shortcomings, particularly the fact that only about 1/3 of the

200825

USSR/Electricity - Literature (Contd) Jun 51

book's vol has a real bearing on the testing of machines. Published by Gosenergoizdat, 1949, 380 pp, R 14.00.

200825

MURKES, N.I.

Noise of electric motors and means for its damping.
Mashinostroitel' no.8:38-39 Ag '63. (MIRA 16:10)

ACCESSION NR: AP4013297 S/0135/64/000/002/0041/0041

AUTHOR: Dorofeyev, V. M. (Professor); Murkin, L. P. (Engineer); Shadov, V. P. (Engineer); Sivirkin, V. F. (Engineer); Marty*nov, V. I. (Engineer)

TITLE: Gas-arc welding torch with vortex stabilization of the arc

SOURCE: Svarochnoye proizvodstvo, no. 2, 1964, 41

TOPIC TAGS: welding, welding torch, gas-arc welding torch, arc stabilization, vortex arc stabilization

ABSTRACT: The article describes the GEG-1A gas-arc welding torch with vortex arc stabilization, developed and produced at the Kuyby*shevskiy aviatsionny*y institut (Kuyby*shev Aviation Institute). The anode is in the form of a copper nozzle with an output diameter of 3.5 mm and a sliding seating arrangement in a tin housing. The cathode used is a tungsten rod 7 mm in diameter set in a fixed position with respect to the nozzle. The electrode assembly is cooled by water fed into the tin electrode holder. The nozzle and electrode assemblies are insulated from each other by a textolite casing with screwed-in nipple for argon feed. The argon is fed into the chamber through two tangential apertures. The introduction into the torch of vortical argon feed eliminated nozzle wear. All three major torch assemblies (nozzle unit, housing electrode unit) are threaded

Card 1/2

ACCESSION NR: AP4013297

together and sealed with layers of conventional technical rubber. Electric current is supplied from a single PS-500 welding converter. A particular feature of the argon supply system is the presence in it of a jet 1.19 mm in diameter; during operation of the torch, a supercritical pressure gradient is set up on this jet, providing for constant argon consumption for the established pressure and variable torch operation modes. The technical specifications of this torch are listed. Orig. art. has: 2 figures.

ASSOCIATION: Kuyby*shevskiy Aviatsionny*y Institut (Kuyby*shev Aviation Institute)

SUBMITTED: 00	DATE ACQ: 26Feb64	ENCL: 00
SUB CODE: ML, SD	NO REF SOV: 000	OTHER: 000

Card 2/2

MURKO, D.; MILOVIĆ, M.

Possibility of using [illegible] for [illegible] plants for the production of building materials. Glasnik [illegible] 103-109 '63.

1. Chemical Institute of the Faculty of Medicine in [illegible].

MURKO, D., dipl. kem.

Trends in the development of chemical industries of Bosnia and Hercegovina in 1964-1970. Kem ind 13 no.11:946-947 N '64.

MURKO, J.

Circular switches of the 45-a system. p. 215
ZELEZNICE. Beograd.
Vol. 11, no. 6, June 1955

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 2, Feb. 1955

MURKO, J.

Photogrammetric measurement of the profile of a tunnel. p. 10

ZELEZNICE. (Zeleznicki institut GDJZ) Beograd.

Vol. 12, no. 7, July 1956

SOURCE: East European List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

MURKO,J.

Problems related to the shifting of railroad tracks. p. 21.
(Zeleznice. Vol. 13, no. 1, Jan. 1957, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) LS, Vol. 6, no. 7, July 1957, Uncl.

MURKO, Josip, inz.

Measurements for the designs of railroad stations. Geod list 16 no.10/12:336-350 O-D '62.

1. Skupnost zeleznisko-transportnih podjetij, Ljubljana (Robbova 2).

MURKO, Josip, inz.

Arched rail joint between two parallel tracks. Zeleznice Jug 18 no.7/8:40-44 '62.

MURKO, Josip, inz.

Projecting the upper sides of curved switches. Zeleznice Jug 18 no.11/12:27-30 '62.

MURKO, L.

1

20. The production of octyl alcohol from cracked gasolines by direct alcohol synthesis. L. Murkó. *Magyar Kémikusok Lapja*, Vol. 12, 1958, No. 10—12, pp. 286—289. 4 figs., 1 tab.

An alcohol synthesis has been developed in the Hungarian Research Institute for Petroleum and Natural Gas Products for producing octyl alcohol from sulphur-containing cracked gasolines by a much simpler process than the previously used oxosynthesis consisting of two steps. The new process also gives considerably higher yields than the former method. The quality of the octyl alcohol produced in this way permits its use without further purification for the production of dioctyl phthalate for use in light-coloured plastics. The new synthesis is based on the finding that the reduction rate of the aldehyde *i. e.* the alcohol concentration in the product is increased with higher partial pressure of carbon monoxide; the maximum being reached when 60—70% of carbon monoxide content is attained in the gas. This advantageous effect of the partial pressure of carbon monoxide may be explained by the increase of the concentration of some Co—CO complex in the active catalyst.

5

[illegible], V.

[illegible]

[illegible]. (Zveza [illegible]
Ljubljana, Yugoslavia. Vol. [illegible], no. [illegible], [illegible].

Monthly list of the East European Accessions (EEAI) LC, Vol. [illegible], no. [illegible], [illegible].

Incl.